

INTERNATIONAL COÖPERATION  
IN PUBLIC HEALTH

BUCHANAN



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THE MILROY LECTURES  
ON  
INTERNATIONAL COÖPERATION IN  
PUBLIC HEALTH

ITS ACHIEVEMENTS AND PROSPECTS

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BY

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# INTERNATIONAL COÖPERATION IN PUBLIC HEALTH

## ITS ACHIEVEMENTS AND PROSPECTS

### LECTURE I

It may be considered to have been the intention of Dr. Gavin Milroy when founding these lectures that they should be a means of enabling a man who had been at work in some particular corner of public health to obtain useful publicity for his subject, and at the same time impose on him the self-discipline of reviewing his experience of that subject in the way which is demanded of one who has the honour of lecturing to the Royal College of Physicians. It seemed to me that I could find such a corner, which would justify my lecturing on it now. After 38 years of official work in the Government health service, I am handing on to my successor the work in applied epidemiology and general hygiene which has been my chief occupation as Senior Medical Officer at the Ministry of Health. That work has come increasingly to be related with, and sometimes even to depend upon, international coöperation, and it is to some aspects of this coöperation that I am now inviting your attention.

Apart from a few questions of port sanitary administration, and from negotiations with foreign countries in connexion with the control over the wholesomeness of imported foods which began with Mr. Burns' Public Health (Regulations as to Food) Act, 1905, I had little personal experience of official international health work before 1914, when the Local Government Board proposed to the Foreign Office that I should be the delegate for Great Britain at the International Public Health Office in Paris. Of this office, which, because French is its official language, is better known as the "Office International d'Hygiène publique," I will have more to say later. Its importance in British eyes was at that time

mainly diplomatic. The British delegate was expected to do his best to make our liberal ideas prevail when it came to imposing restrictions on shipping on account of infectious disease, and be ready to give a rational turn, from the point of view of British interests and British hygiene, to the administrations in the Suez Canal, at Constantinople and elsewhere, which controlled the key points by which first cholera, and later plague, might gain access to Europe. In this respect he had to maintain the positions which, since the cholera pandemics of the middle of last century and the later Hamburg outbreak of 1892, the medical advisers of the British Government, notably Netten Radcliffe and Thorne-Thorne, had successfully fought for and secured. But he was not expected, nor at that time would it have appealed to him, to make the international office a means by which the delegates of the several countries there represented (and at that time many important countries remained outside) could concert together common official action for the prevention of disease or for the promotion of public health, outside these narrow limits. Within them our Government had been admirably served, first by my colleague Dr. Theodore Thomson, whose untimely death was an incalculable loss to State medicine in England, and then for a short period by the late Dr. R. Johnstone, who had seen through the International Sanitary Convention of 1912. I need not speculate on what I might have myself made of the position at that time; the war years supervened, during which most of the functions of the Paris Office were in abeyance. After 1918 the situation was altered. The war itself had shown the advantages, as between the allied armies and countries, of pooling information about disease prevalence and prevention—or to put the matter inversely, the drawbacks of inadequate coöperation. The great forces of the Red Cross, with their international outlook, could hardly have been demobilised without thought being given to the extension of their universality and catholicity to the post-war world for which we were then groping. The League of Nations was being formed, and the ideals of its founders for obtaining union between nations extended to its providing, or even forcing on, international coöperation in technical and humanitarian questions. Moreover, in many coun-



tries, by the formation of separate Ministries of Health or otherwise, public health was receiving a higher official status, and was undertaking new work calling for international contacts. Finally a common peril, the threatened spread of epidemic typhus from Russia through Poland to the west of Europe in 1918 to 1920, made an immediate call for coöperation.

The years 1919–21 thus were the occasion of many conferences and discussions with the object of securing, if possible, a single mechanism, dependent on the League of Nations, by which health questions affecting Governments could be dealt with internationally, and of settling at the same time what particular questions were ready for the proposed machine. Those who are interested in the phase in which the matter stood in 1921 may be referred to an address which I gave to the Society of Medical Officers of Health in February of that year (*THE LANCET*, 1921, i., 415) on International Organisation and Public Health. It is true that this address led up to the description of the mechanism for the purpose which had been adopted by the first Assembly of the League in December, 1920, but did not materialise—the chief reason being that certain important Governments objected to the Paris Office being placed under the direction of the League of Nations. But they will also find a number of health matters then catalogued as requiring joint Government action which *have* since materialised and have now been adequately treated by the actual international machinery which was ultimately arranged, and has been in operation during the last 13 years.

A few landmarks have here to be noted for reference. The Secretary-General, personally and through Dame Rachel Crowdy, D.B.E., who was then charged with this subject at Geneva, and afterwards through the late Dr. E. J. Steegmann, acting Medical Secretary, took steps to consult responsible officers in the public health services of several countries, including the United States, while several members of the Council of the League, particularly M. Léon Bourgeois and Lord Balfour, were active in pressing for immediate attention to the question. The then Director (M. Cazotte) and Assistant Director (Dr. Pottevin) of the Office International d'Hygiène publique, and M. Velghe, the President of its Permanent Committee, were naturally brought into these consultations, as was the League of Red Cross Societies through its General

Medical Director (Colonel R. P. Strong), and the International Labour Office, in respect of its industrial medical section, through Mr. H. B. Butler. By July, 1919, the position was ripe for an informal conference, held in London at the Ministry of Health, over which its then Parliamentary Secretary, the present Lord Astor, presided. This conference was then invited by the Council of the League of Nations to reassemble as a formal conference, adding to its members a small number of international health experts. This formal conference met in London in April, 1920. Based on its work a draft constitution of a public health organ of the League was submitted to a meeting of the Council at San Sebastian in August, 1920, which I attended as technical adviser to Lord Balfour. There emerged the constitution accepted, with a few modifications, by the First Assembly on Dec. 10th, 1920, and recorded in its minutes. The decision of the Assembly, to become effective, required the assent of the Governments parties to the Rome Convention, 1907, and, as stated above, it was afterwards found that this assent could not be obtained. The First Assembly plan, stated briefly, was to recognise the existing state of things by continuing the Office International with its existing personnel and offices at Paris, which would be the normal place for meetings, but to transfer much of its executive work and all new undertakings to a medical secretariat at Geneva. The latter was to be directed by a small technical executive "Standing Committee," which in its turn was to get its policy from and be responsible to a general Health Council. The last-named would have consisted of the delegates to the Permanent Committee of the Office International with the addition of technical delegates from various countries not then participating in the work of the Office. The general Health Council—i.e., the enlarged Permanent Committee of the Office—the Executive "Standing" Committee, and the Geneva medical staff were for their particular business to be in a mutual relation comparable to that of the Assembly, Council, and Secretary-General of the League itself.

The point of this scheme which is most noteworthy in view of subsequent developments was that it made the whole health work of the League, including that of the Paris Office which would have been placed under the direction of the League, ultimately dependent on a general assembly consisting of technical delegates all nominated officially to that position by their respective Governments.

The catalogue which I made in my 1921 address of the principal subjects which were then being brought up as requiring international action showed the chief to have been the revision of the international



sanitary conventions, the establishment of a new system by which public health administrations could rapidly exchange intelligence about the occurrence of infectious diseases, provision at the principal seaports of agreed practices for treating venereal diseases in the mercantile marine and for the destruction of rats, unification of vital statistics, and organised relief work for major epidemics, such as the European typhus above referred to.

Looking back at that catalogue, I gladly recognise its incompleteness; many more questions than were then foreseen during this period have received effective attention from the International Health Office at Paris or the League of Nations Health Organisation at Geneva. It may be regretted that the formal combination of both these organisations under the League was not established as intended in December, 1920; but it may be contended on the other hand that several events have shown the advantage of the decision that they should function separately under a specially elaborated system of liaison, and one which can at any time be reconsidered if circumstances call for it.

The main lines of this liaison were established at a conference in Paris in May, 1923, of a "Mixed Commission" (members of the provisional Health Committee of the League, in function August, 1921, to June, 1923, and of the Permanent Committee of the Paris Office), convened at the request of the Council of the League and presided over by the late Dr. Alexander Granville, C.M.G., President of the Sanitary Maritime and Quarantine Board of Egypt. The constitution of the Health Organisation of the League, as drawn up by this Commission, was formally accepted by the Permanent Committee of the Paris Office and the Council and Assembly of the League, and it is embodied, along with various subsequent resolutions of the Council, in the present organic statutes of the Organisation. In addition to a medical staff of the Secretariat, appointed by the Secretary-General, the "Health Organisation" comprises a Health Committee, whose members are appointed triennially and in their individual capacity. This committee is appointed by the Council, which, however, accepts nominations of nine of the members from the Permanent Committee of the Paris Office. The Permanent Committee of the Paris Office is by this instrument also made available for consultation by the League; and its members have the right to receive the League's medical publications and to advise as to the annual programme of work at Geneva. In practice the Medical Director of the League attends or is represented

at the sessions at Paris and the Director of the Office International d'Hygiène publique those of the Health Committee at Geneva. In 1926 other links were created by the use of the Singapore Bureau (to which I refer below), as a regional bureau of the Paris Office for information about epidemics in the Far East, and by an arrangement whereby a weekly statement about infectious diseases, supplied by Governments to the Paris Office under the terms of the International Sanitary Convention, 1926, is transmitted to Geneva and receives general publicity in the "Weekly Epidemiological Records" issued by the Health Organisation.

A consideration of much greater interest is what has been accomplished since we started on the broader road, after the war, both at Paris and at Geneva, and what encouragement we have to do more work on the same lines in future. It is with this that these lectures are mainly concerned.

As in 1921, I am anxious not to seem to claim too much either for the work on which these official international offices are engaged or for the work which they ought to undertake in future. Any suggestion that medicine, always among the most international of the learned professions, should henceforth first look to the League of Nations or any other inter-Governmental office in order to maintain its proud tradition of internationalism would indeed be retrograde. Lister, Pasteur, and Koch were all good patriotic nationals, but it goes without saying that their work was done for and taken by the whole world. In ordinary medical connexions their nationalities trouble us as little as that of the great musical composers. Voluntary and unfettered association with our colleagues in foreign countries and the British Commonwealth of Nations is vital for us. And when medicine and hygiene in the United Kingdom tend to become too insular—as they sometimes do—it is fortunate that we have the publishers and the medical journals to put us in the right way. They have, for our good, an international tradition, all the stronger because they are not officially guided or, in the jargon of to-day, not rationalised. And it is the same thing with the many congresses and conferences on medical subjects which are organised year after year by the profession itself. We all affect to regard them as a trial, but we go to them and we benefit. Governments may assist these conferences—one may mention specially those of France, Italy,



Spain, Belgium, and Holland as always active in this connexion—and Government aid is a great help to their organisers. But it is assistance with the amenities, and in no sense implies interference with the organisation, objects, or conclusions of the conference. At random, and taking European conferences alone, I have notes of 24 international medical meetings in 1932, and 23 in 1933 down to November. They range from small gatherings with a closely guarded membership, such as the Congress on Urology held in London last year, to larger meetings like the Journées Médicales at Brussels, or the recent Cancer Congress at Madrid, which have lay as well as medical elements. This is in Europe, but we must also take account of similar international meetings in the Americas and Congresses such as those of the Far Eastern Association of Tropical Medicine, which have so wide an influence in spreading knowledge and promoting research all through the East. In fact, if physicians, when they hear international medical work spoken of, think first of their personal association with particular gatherings of this voluntary kind, and of contacts and friendships then established with colleagues from overseas, it would be natural and fitting. Nothing could replace them.

Research workers again, as well as those concerned with certain aspects of public health administration and education, will very properly associate international medical work first and foremost with that great international body, the Rockefeller Foundation.

#### THE ROCKEFELLER FOUNDATION

If the Rockefeller Foundation is not strictly speaking a body designed to secure international coöperation of the kind with which I am here dealing, it is none the less an international body in the sense that it is one of its principles to distribute its work among all the nations. It is difficult to over-estimate our debt to this institution, and to the idea of the family which founded it, that some of its money profits drawn from every part of the globe should be returned so as to "promote the well-being of mankind throughout the world."

The Foundation, which as at present organised has its headquarters in New York with important branch offices, for example, at Paris and Peiping, succeeded in 1928 the "International Health Board" which had been formed in 1913, and itself arose out of the Rockefeller Sanitary Commission on hookworm in the United States which began in 1909. On the health and medical side it has two

main divisions—for international work and for work on the medical sciences respectively. The latter is the more recent development, on which chief emphasis was laid in making the changes of 1928, and itself represents a stage in evolution. Beginning with giving assistance in various ways to particular practical measures of public health in suitable areas and the local demonstration of what can be done locally against particular diseases, the Foundation soon came to extend its efforts to the advancement of medical and public health education. From this it has been led to include in its programme work for the direct advancement of the medical sciences themselves and to methods of subsidising research in a way which Governments are rarely disposed to do. All these activities continue side by side, and their universal character has been maintained. The annual reports of the Foundation give abundant evidence of the large scale on which the sums have been disbursed and the wideness of the geographical distribution of the work, while, for an outline of the Foundation policy in these matters readers should consult “The Rockefeller Foundation: a Review for 1928,” by Dr. George E. Vincent, published in the following year.

If reminders of the result of the work in the British Empire were necessary, we have only in London to think of the building of the London School of Hygiene and Tropical Medicine, opened in 1929, or the clinical research professorship at University College, or the assistance given to other medical schools in Oxford, Cambridge, and Edinburgh. The Dominions and India (notably by the assistance given to the All-India Institute of Hygiene and Public Health at Calcutta) furnish plenty of other examples. Teachers and investigators from the British Empire, moreover, are included among the 500 individuals from 48 countries to whom the Foundation annually gives fellowships for study in countries other than their own; while it is common knowledge that many British colonies and possessions are now actively benefiting by research work such as that conducted at the New York and other laboratories into the virus of yellow fever. If I was writing of France, Italy, or China, to take three countries at random, the examples to give would be no less striking.

This is not the occasion to discuss the many different methods by which the Foundation proceeds in the execution of the different branches of its health and medical policy, though its practice of limiting its grants to established bodies, government services, or institutions must be mentioned. In general, the Rockefeller tradition is one of freedom from political ends, international as much as national. It is no part of its programme to get together official conferences of experts from different countries, or to suggest health policies to Governments, in the way which is done by the organisations at Geneva and Paris.



Nevertheless, as much of its health work is done through the Government health services, and as its activities leave hardly any region on the map of the world untouched, its indirect influence in securing good international relationship between medical workers is very great.

It is impossible also to consider international organisation in medicine without looking back to the battle of Solferino, to Henri Dunant, and so to the handful of Geneva citizens through whom the International Red Cross Committee was established in 1864. The whole Red Cross movement dates from then and the several international Red Cross Conventions have followed. Memories of Red Cross work in time of war and of the international obligations attaching to that symbol are still with all of us, while since the war there has been a notable development of Red Cross peace-time work on international lines.

#### THE RED CROSS AND LEAGUE OF RED CROSS SOCIETIES

The International Red Cross Committee continues its work at Geneva, and deals with the fundamental principles of the Red Cross and with the International Conventions from which it derives authority. It is a separate and independent part of the International Red Cross organisation, as defined by statutes adopted at the Thirteenth International Red Cross Conference at the Hague in 1928. Side by side with it now in the International Red Cross Organisation is the peace-time branch of the Red Cross, represented by the League of Red Cross Societies—with the creation of which, in May, 1919, the name of the late Mr. Henry P. Davison is so honourably associated. The membership of the League is restricted to participating national Red Cross Societies, now 58 in number; it has a representative Board of Governors, a small Executive Committee, meeting twice annually, and a Secretary-General, now Dr. René Sand, with headquarter offices in Paris. At present the League's principal peace work, in addition to coördination, lies with relief in times of disaster, popular health education, and the training of nurses. The League of Red Cross Societies was also instrumental in the establishment of the International Hospitals Association, and has taken special interest in matters affecting the welfare of the merchant seaman.

#### Health Work of the League of Nations

Where then, on lines not covered by the organisations I have described, has the League of Nations come into the picture of international coöperation in health matters? Obviously the Governments which

the League represents have no particular reason to compete, or deal otherwise than by friendly unofficial liaison, with international medical congresses, with the Rockefeller Foundation or the Red Cross work. Moreover, it was settled in 1921 that the International Health Office in Paris should continue, independently of the League, to carry on the functions of an organ which had been established under formal diplomatic agreement (1907). This was an existing body dependent on a committee which consists of technical representatives of Governments on public health questions, available and capable, within the limits of its finance, for taking up the study or regulation of any international questions affecting Government health services.

When one seeks to explain how the Health Organisation of the League, while escaping from most of the dangers of overlapping, supplanting, or superseding the work of other organisations which should be allowed to develop on their own lines, has yet succeeded in making a position for itself to which the world is ready to pay tribute, one comes at once to emphasise the following considerations :—

(1) The wide terms of its charter. By Article 23 (f) of the Covenant the States members of the League have undertaken the duty in general terms to “endeavour to take steps in matters of international concern for the prevention and control of disease.”

(2) The decision taken at the earlier Assemblies, and since maintained, that a substantial sum, in recent years stabilised in the region of 1 million Swiss francs (£40,000 at the old exchange rate ; the Swiss currency remains on the gold standard), with a generous annual addition from the Rockefeller Foundation, should be allotted each year to the organisation, enabling it to be provided with a considerable medical staff under a Medical Director, who holds one of the highest positions in the Secretariat.

(3) The great post-war extension in State organisation of, or State control over, medical and public health work in almost every country in the world, which has resulted in new demands for aid with the experience of other countries. The official collaboration required is now not only the prevention of particular exotic diseases but something very much wider.



And to these I would add a fourth—namely, an active opportunism, ready to seize upon projects which have not been undertaken before from an international standpoint, to try them out, and gain experience from success or failure. In the health work done at Geneva during its first 13 years attempts to systematise and define what should or should not be done have, fortunately, not been very fruitful. The impulse has come sometimes from the administrator, sometimes from the laboratory, sometimes from the insistence of some particular Government or delegate, and sometimes again, has been essentially due to some political factor which has made it desirable in the interests of the League to show its flag and inscribe international health upon it. Dr. L. Rajchman, who has been the League's Medical Director since 1920, and whose ability is so universally recognised, has never failed to capture or provoke these impulses at a suitable moment, and to make his organisation respond to them. As a result certain lines of activity, arbitrary if you like, have become recognised as a fixed part of the Geneva work ; other undertakings have been completed, or it may be dropped or put into cold storage. In other words, it is a young, living, and still growing organism, seeking to learn and do its best to fulfil and do credit to the article of the Covenant which I have quoted.

For proof it is only necessary to look through the large number of reports and publications of the Health Organisation and observe the extensive ground which they have covered. A complete collection, I believe, exists in the library of the College and in one or two other important medical libraries in this country. Since 1931 their systematic collection has been greatly facilitated by putting the reports of Commissions and the expert studies into a Quarterly Bulletin. By taking this Bulletin, along with the records of the sessions of the Health Committee and of the Second Committee of the Assembly (which deals with the Technical Organisations of the League) and a few specially printed reports, such as that of the Singapore Bureau, the Geneva output can be appreciated as a whole.

It is not too easy to classify these activities and select examples, but I may begin with some instances of work in which the League has been able to render

a definite service to medicine, and then go on to other matters in which the League has found advantage in using medical and public health knowledge to further its own objects of promoting fellowship between nations.

#### BIOLOGICAL STANDARDS COMMISSION

Our Therapeutic Substances Act is as recent as 1925, and it was only when that Act, and the regulations made under it, came into operation that we were in a position to exercise effective control over the purity of potency of therapeutic substances which cannot adequately be tested by chemical means. We now accept this control, both for the home product and for products coming from overseas, as part of the natural order of things, and are familiar with the exact and scientific methods by which the regulations have been prepared and are enforced through the National Institute for Medical Research and the central public health departments. But the part played by the international conferences on these questions can hardly be over-estimated. Some years before the enactment of our own legislation it had been evident that the difficulties which we were encountering were also weighing heavily on other countries. The uncertainties about the measure of potency of antitoxic sera, notably those for diphtheria and tetanus, received immediate attention after the war; as also did the need for a better understanding of the tests to be applied to salvarsan and analogous substances. National difficulties in deciding on the admission of these remedies from foreign laboratories and doubts about the sufficiency and efficiency of purely national methods of control, found expression at the Paris Office in 1919 and 1920. It then became clear that it was only by the close association of expert workers in the principal laboratories concerned that any satisfactory agreement could be arrived at either as to tests to be applied or as to the standard substances which should be maintained in particular laboratories for international reference.

Here it was at once realised was a promising ground for the new International Health Organisation of the League, which had sufficient funds at its disposal to organise the necessary conferences and coördinate work in different laboratories. The first trial of this method, especially in relation to the antitoxins I

have mentioned, was initiated by a conference in London in 1921, followed by another in Paris in November, 1922. Meanwhile, on the side of therapeutic substances requiring biological tests, another conference was prepared for and held in Edinburgh in July, 1923, when a beginning was made in obtaining a common basis for the measurement of composition, potency, and purity of such substances as thyroid and pituitary extracts, ergot, and digitalis, and another beginning with insulin. Other conferences have since followed at Geneva (1925), Frankfurt (1928), and London (1931) as well as meetings of groups of workers on special subjects at Copenhagen and elsewhere in between sessions. The report of the London conference of 1931<sup>1</sup> gives a useful review of the whole of the work completed to that date, and the matters then left outstanding, with some new questions like the standardisation of sex hormones, are to be considered at further conferences during the present year. All this varied work of standards has throughout been planned and kept going by a small body of experts which now constitute the "Permanent Commission on Biological Standardisation." Dr. Madsen is the chairman of this Commission, which includes Sir Henry Dale, Prof. Kolle, Dr. McCoy, Prof. Bordet, and Prof. Louis Martin. A collateral conference on the standardisation of vitamins was held at the same time under the chairmanship of Prof. Mellanby.

The Commission on Biological Standardisation thus now occupies a key position in securing reasonable and scientific control over the quality of these essential modern remedies. The British Pharmacopœia, in 1932, in dealing with substances only assayed by biological methods, now includes those alone for which the Permanent Commission on Biological Standardisation has recommended a definite standard of reference, and accepts the principle that no biological method of assay is satisfactory which does not depend on a comparison between the sample to be tested and the standard preparation. The work of providing and distributing samples of these standard preparations in this country is undertaken by the National Institute for Medical Research, and that Institute acts in several cases as the depository of the international standard itself, on behalf

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<sup>1</sup> League Publication III. : Health, 1931, iii., 10.



of the International Commission. The chief standard vitamins are thus maintained there. Other international standards are kept on behalf of the Commission at designated laboratories at Copenhagen, Washington, Frankfurt, Batavia, and elsewhere.

The spade work and the practical decisions on these different matters fall, of course, on the experts and laboratory workers themselves in their own countries. The part played by the Geneva organisation is the essential one of maintaining continuity and providing the necessary centre on which national results can be focused. By now the medical staff at Geneva has gained much experience in the arrangement of these conferences; in fact each conference brings with it a new experience, which facilitates the progress of a work which must necessarily be continuous and requires a high degree of organisation at headquarters.

#### INTERNATIONAL STUDY OF "HEROIC" REMEDIES

This experience indeed has lately led to the revival of a similar project—namely, to entrust to the Health Organisation of the League of Nations the duty of arranging for continued expert study of heroic remedies by pharmacologists and chemists. The International Conference on the Control of Heroic Remedies, held in Brussels in 1925, it will be remembered, fixed the quantities of particular potent drugs—morphine, strychnine, cocaine, &c.—in the standard products which find a place in the different national pharmacopœias. There can, however, be no finality either in the quantities and proportions of these substances required in medicine or in the tests applied for their determination; while the need for including new preparations has always to be borne in mind. The matter has still to be considered by the Health Committee of the League, but experience of the Permanent Commission on Biological Standardisation can without doubt be effectively urged in support of the proposal.

#### WORK ON MALARIA

Malaria was among the first international health questions which the League of Nations was asked to include under the terms of Article 23 of the Covenant requiring it "to endeavour to take steps in matters of international concern for the prevention and control of disease." As the British Empire, with its vast tropical territories in Africa, India, and the Far East, is more concerned with malaria than is any other group of nations in the world, it was appropriate



that this country should take the initiative in requesting the League to consider it. As British representative on the League's Health Committee, on the advice of my colleague, Colonel S. P. James, I brought the subject to notice in May, 1923, in connexion with the remarkable epidemic extension of the disease which was occurring in South Eastern Europe. This resulted in the appointment of the Malaria Commission of the League under the presidency of the Italian member of the Health Committee, Dr. Lutrario. That Commission constitutes a body of experts who are well qualified to act as a central agency to which the health administrations of different countries can submit their malaria problems for information and advice, and it has made it its business to collect and analyse information from all parts of the world on the incidence, epidemiology, prevention and control of the disease. Though not in a position to undertake research work itself, it has also stimulated and coördinated national research. At an early stage "study tours" of malarious countries were made by expert members or groups of members of the Commission. During these tours information furnished by local workers and observations made on the spot were examined and discussed by malariologists belonging to varied schools of antimalarial practice and opinion. Holland, Denmark, Yugoslavia, Czechoslovakia, Greece, Bulgaria, Rumania, Russia, Italy, Spain, Corsica, Palestine, the United States, and India are some of the countries in which these tours of inquiry have been made.

I have spoken of the opportunism which has determined our lines of work at Geneva; and this certainly was an example of an opportunity seized at the right moment. In the years immediately following the war there were countries, like our own or the Netherlands, in which the former prevalence of malaria had been almost forgotten, but which were in the new position of receiving human carriers in abundance from the malarious war areas, while they still had no lack of indigenous anophelenes to provide the necessary insect carrier. Other countries in Europe seemed, as a result of war and post-war changes, to present the difficult problem of an increased general susceptibility of their population on the one hand, and the introduction of new and virulent strains of the malaria parasite on the other. Then

also, there were countries, including new colonies or possessions, which were beginning to organise or reorganise their public health services, and finding how malaria dominated the position. However clearly it seemed to have been proved that particular areas, like the Panama Canal zone, could be freed from indigenous malaria by the systematic and thorough attack on the insect carrier through the suppression of its breeding places, and by protection against the adult anopheline, to advocate a general application of this radical measure to the malarious populations of the world—to the great river deltas, fens and marsh countries, let alone the malarious hill countries—was a mere counsel of despair. No health authority could be given the staff to do it, no administration could for a moment contemplate the expense, while half-measures on this basis were useless. It was the time, therefore, in the search for practical alternatives and practical policies, to take up wider views of malaria and its epidemiology. Why had malaria practically disappeared from Northern Europe before any of the knowledge we had from Manson and Ross? What is the extent of the natural protection conferred by attacks of malaria in infancy, and what part does natural or acquired immunity play in a malarious district? How is it that mere intensive agriculture, the Italian “bonifications,” and other measures for increasing the general welfare and prosperity of the people have by themselves done so much to reduce malaria? These and a host of other questions, like the prophylactic use of quinine, were going through an agitated period; controversies had multiplied, and rigid doctrines were being set one against the other. It was a service then to many countries and Governments to bring their exponents together, not merely to hammer out a least common measure of agreement or a formula, but to confront them with the problems on the spot, under differential conditions, and then see what common advice they could arrive at. It was only when this had been done in a sufficient number of instances that the Commission set itself to the general review of the principles and methods of malaria prevention published in 1927: “Principles and Methods of Antimalarial Measures in Europe” (C.H./Malaria/73), a publication which has proved invaluable by showing the many ways in which malaria can be effectively controlled, and



the conditions which should determine their choice in a particular case.

The question whether pure quinine is essential, or is only an expensive medical habit which could be abandoned for other cinchona preparations or mixtures was answered in favour of the latter. The Malaria Commission of the League has responsibility for *Totaquina*, a cheaper product in which all the alkaloids in cinchona bark are present, but standardised to 70 per cent. of crystallisable alkaloids, of which not less than 15 per cent. must be quinine. *Totaquina* appears in the last edition of the British Pharmacopœia and is now being used for the treatment of malaria in several countries of Europe and the Far East.

And while this work was proceeding two events of outstanding importance in the history of malaria research occurred. The first was the discovery in Germany of synthetic drugs which promise to be more effective antimalarial remedies than quinine. The second was the application in England of the clinical practice of "malariatherapy" and the study of malaria in the human subject under controlled laboratory conditions. These events quickly led to great advances in knowledge and to a radical change of thought and opinion on many aspects of the disease including methods of treatment, control, and prevention. The Malaria Commission of the League had taken no part in those events, but the Commission was there; it had proved its ability in other fields, and it was natural to seek to use it as an organisation through which the new knowledge could be sifted out and brought authoritatively to the notice of all malarious countries. Workers in the several countries where the new researches were being conducted willingly agreed to collaborate in the preparation of an agreed "international" report, with the result that a comprehensive article containing the most recent information available was published in the League's Quarterly Bulletin for June, 1933, under the title "The Therapeutics of Malaria." This comprehensive account of the subject is evidently serving a useful purpose, for it has had to be reprinted and is said to be a "best seller" among League publications. It has, at the right time, met a real want on the part of public health officers in many countries.

Mention should be made of one other matter in

which the international machinery of the League has proved useful in dealing with malaria—namely, by aiding the establishment of different centres of courses of study for junior medical officers, of any nationality, who are about to undertake antimalarial work in the public health departments of malarious countries.

#### “ APPRAISAL ” IN OTHER DISEASES

The system of “ appraising ” data from different countries has been applied to certain other disease problems. For some of these the Secretariat has been so fortunate as to obtain the services of some one man to give the time and trouble necessary to an elaborate survey of material obtained from many countries. Dr. McKendrick’s reports on the results of antirabic treatment in different parts of the world is a case in point, as also are the long and careful studies made by Dr. E. Burnet resulting in his monographs on international practice for the control of leprosy and tuberculosis. In other instances a system of “ expert committees ” has been followed, each with a rapporteur to do the main work. Reports on infant welfare and maternal mortality have been done in this way. In this connexion the work done, or now in hand, in relation to syphilis and cancer may be mentioned in a little detail.

#### WORK ON SYPHILIS

I refer below to the action initiated at the International Office of Public Health at Paris in 1920 to secure the agreement which has since been made between maritime countries for the free treatment of venereal diseases at the principal seaports. Part of this scheme was that the merchant seaman, on visiting a seaport clinic, should be given a personal card with entries, intelligible at the clinics of other ports in other countries, showing his diagnosis and the treatment he had received. Naturally, in the case of syphilis, this meant entering the results of his serological tests. At once, however, questions arose about the notation to be employed for the results of the Wassermann test and about the significance of the test when done in different ways. The same questions came up at the conference on the welfare of the Mercantile Marine at Copenhagen in 1921, when the practical application of the proposed international agreement was being considered. These were diffi-



culties universally felt, going much further than the sailor at the port clinic. A particular clinician who was used to a particular serological notation employed by himself or by the pathologist with whom he habitually worked, could, of course, use the +, —, or  $\pm$  signs in any convenient way without troubling about the actual or relative value of these signs ; and he could multiply, vary, or qualify his symbols as he chose. But what was another man, out of touch with him, to make of them ? Then, too, came the question of the influence of minutiae of laboratory practice on the results of the Wassermann test, while, as the study of the subject went on, the advantages and drawbacks of substituting flocculation tests (Sachs Georgi, Sigma, Meinicke, M.T.R.) for Wassermann methods could not be ignored. To realise the practical importance of a general understanding on all these matters one had only to consider how the welfare and the treatment of all the many cases reported to be on the serological borderline were being quite arbitrarily governed by the tester, his methods, and his notation.

These matters were taken up at successive expert conferences arranged for this purpose by the Health Section of the League in London in 1921, in Paris in 1922, and in Copenhagen in 1923. The last of these was a working laboratory conference lasting for some weeks at which representatives of eight laboratories in Austria, Belgium, Denmark, France, Germany, and Great Britain met together and tested the same 500 specimens of serum by a series of different serological tests, each in the way preferred by the experimenter. The findings of this conference as to essential details of the tests are well known, since the standard notation for reporting results which it recommended is now in general use. In 1928 the subject received further attention at a second laboratory conference in Copenhagen, on an even larger scale, cerebro-spinal fluids as well as serums being tested ; there has also been another important laboratory conference of the same kind in South America—in Montevideo in 1930. The whole ground covered by these conferences was reviewed as recently as October, 1932, in a report by Jadassohn, Gougerot, and Harrison, drafted by Dr. Moersch, of Copenhagen, and published in Vol. 1, No. 4, of the Quarterly Bulletin of the Health Organisation of the League. The rules therein recommended have since received a wide acceptance. It is beyond question that these laboratory conferences have been of great value in promoting improvements in serum tests for syphilis and helped to a more judicious use of them in practice all over the world. For this result special recognition

should be given to the President of the Health Committee, Dr. Madsen, whose laboratory at Copenhagen has been designated by that committee as the central laboratory for reference in these matters, and to the indefatigable efforts of Colonel L. W. Harrison in this country, from the beginning of the inquiry, to maintain the highest level of precision in its work and exactness in its conclusions.

As with malaria, so in this case one piece of international expert coöperation led to another. This close association of syphilologists for the purpose of dealing with serum tests which are vital for modern treatment could hardly escape leading to mutual consideration of modern treatment itself. There is the greatest diversity of opinion on the amount of different remedies necessary to eradicate syphilis; treatment suffers, and may even be discredited, by these divergencies. Could not something be done by pooling knowledge? The Health Committee was persuaded to accept the challenge, and collect from a large number of countries individual case records made out on a standard plan showing stage of the disease, amount of treatment, and serum reactions before and after treatment. It sounds—indeed when first proposed it was thought to be—a fairly simple thing to do. In point of fact, the difficulties have proved considerable. With the best will in the world, busy clinicians and institutes do not find it easy to maintain special books and records over a long period; they must be fully satisfied that the analysis which results from combining their work with others will be worth having; and they are well aware that magnitude of data does not necessarily compensate for inaccuracy or error. Colonel Harrison by his energy obtained over 3000 individual records from clinics in England and Wales, and by 1932 he had seen to their preliminary examination and transmitted them to the centre chosen for global analysis under the advice of the expert Subcommittee of which he is a member. Other countries have also responded on a large scale, and it is estimated that in all something like 30,000 case records will have been sorted out for consideration by the Subcommittee when it meets this year.

## LECTURE II

### Cancer Studies

PERSONALLY I have always opposed proposals that the League's Health Organisation should enter on the road of conferences on cancer at large ; we are not strong enough to do them well, nor do I believe that much good would come of them from the official point of view. But still, cancer is among the greatest of the causes of mortality, and all Government health services, sooner or later, must occupy themselves with cancer questions. At Geneva we have selected two lines : first the comparison of national cancer statistics, which occupied us from 1923-27 ; and later, the results of radiological treatment of cancer of the uterus. For both there were special reasons.

*Comparative Studies.*—A Cancer Commission of the Health Committee, of which I had the honour of being President, was appointed in 1923 and reappointed in 1926. Up to 1927 the principal work of this Commission consisted in making serious endeavours to ascertain the different causes which produced the very notable difference in the mortality from cancer in certain, mainly European, countries. The countries in question all possessed national mortality statistics for a long series of past years, and there was no *prima facie* reason to consider any one of them to be more favourably placed than the others in regard to accurate diagnosis of cancer as a cause of morbidity or mortality. The sites chosen for study were the breast and uterus, organs for which on the one hand diagnosis of the cause of death is relatively easy, and on the other hand the mortality differences between the countries was most striking.

The inquiry was pursued by expert statistical analysis of massed figures and also by special sampling investigations organised by the Commission, and numerous useful monographs on different aspects of the question were obtained. When the inquiry was rounded off, in October, 1927, by the summarising report (C.H. 631), there were both failures and successes to record : failures, in that every conceivable method of analysis open to the Commission and its distinguished experts had failed to produce any single clear-cut explanation of the divergencies in the national mortalities from cancer in the countries



studied; successes, in that many plausible *a priori* explanations had been thoroughly tested and found wanting. The ground was cleared of all kinds of misconceptions about the effect of registration systems, age-distribution, marital state, racial proclivity, and the like—work which wanted doing, and could only have been secured by the special international expert methods of inquiry which were followed. And a further and not inconsiderable practical benefit resulted; the so-called “natural” duration of cancer in these sites was determined on a broad basis of observation, while the predominating importance of early diagnosis and early operative (or radiological) treatment was illustrated equally for every country: useful public action for the prevention of cancer of these sites, in present knowledge, consists almost wholly in facilitating this early diagnosis and treatment. Among the British participants in this work grateful mention must be made of Prof. Major Greenwood and Dr. Janet Lane-Claypon.

The Health Committee, in 1928, following the advice of the Cancer Commission itself, decided to regard these comparative inquiries as completed. Their resumption after a few years, perhaps with some new methods of approach, may well prove desirable.

#### RADIOLOGICAL TREATMENT

The work of the sub-commission appointed on this subject is summarised in a report of June, 1929 (League publication C.H. 788), which—in English-speaking countries at least—has received much attention and been recognised as authoritative. This report set out some very necessary general principles in regard to the use of radiotherapy in general. In addition, the way in which radiotherapy was applied to cancer of the uterus at Paris, Munich, and Stockholm was explained; and the necessity for standardising observations and records, including facts as to recurrence of the growth and length of survival after treatment, was demonstrated.

It emerged from this inquiry that while governments, and hospitals, and philanthropists are spending enormous sums on the purchase of radium and in the provision of other radiological treatment, no satisfactory way of assessing or comparing results of different radiotherapeutic methods can be found unless the principal radium and gynaecological institutes will agree to adopt (1) a standard nomenclature to describe the stages of the disease; (2) an agreed method of case-recording; and (3) a satisfactory system of following up treated cases to ascertain their condition at least three years after treatment.

The recommendations of the Radiology sub-commission, endorsed by the Cancer Commission and the Health

Committee, were quite explicit and authoritative on these three requirements. It was then necessary to promote their observance, and in due course to collect the results and submit them to competent expert analysis. For this purpose recourse was had to administrations, institutes, and individuals in a considerable number of countries, which were provided with special case-record books in different languages. It was necessary, moreover, to explain the method which it was desired to follow in some detail, and so far as possible to arrange that some one person in each country would be charged with the distribution of the records and would periodically report on their use. For the United Kingdom this duty has been undertaken by my colleague, Colonel Smallman, and some 30 of our more important hospitals and institutes have for over two years kept particular records of radiologically treated cases of cancer of the uterus on the international form, in addition, in many cases, to the maintenance of other records of the same cases for the purposes of our own Radium Commission. The lines on which an ultimate analysis of these records will be made are to be settled by a conference of gynaecologists and radiologists to be held this year in Zurich, at the same time as the International Radiological Congress. It is impossible to forecast the results, but it seems equally impossible to believe that the examination of data obtained on these uniform lines by so many responsible authorities will not supply a definite and useful addition to knowledge of the subject which would be unobtainable in any other way, and which will itself justify the trouble which has been taken in recording cases and in following them up from year to year to ascertain their after-histories.

I have dealt rather at length with the expert commissions and inquiries undertaken from Geneva into essentially medical subjects as it is a part of the work which is perhaps not as well understood as it deserves to be, and yet at the same time appears to me to offer great advantage to medicine if it is used judiciously and with discrimination and always with the intention that its quality should be such that the professional man and technician will associate good solid work with a League Commission on the subjects he knows about. It is only in this way that the meetings of the "experts"—you must pardon the inevitable Geneva term because of its convenience—can be made more than occasions for an agreeable interchange of platitudes and a search for convenient formulæ to hide divergence of opinion and enable each participant to go on his own way as before. All who take part in these joint inquiries

should feel that they have an unusual opportunity which may not recur to gain from pooling knowledge and collectively to advance it. The function of the Health Organisation is the modest but essential one of providing the opportunity ; and of seeing that, when appropriate cases arise, medicine obtains the advantages which an experienced international organisation, with its headquarter mechanism, translators, précis writers, and funds can supply with greater ease than another. Given care and thought in the selection of what is appropriate from the side of medical needs I see no reason for any check in the progress which has thus far been made ; on the contrary, there is every reason to hope for its extension as its quality becomes better known and more impulses for its continuance come from the medical side in different countries.

### **General Work of the Health Organisation of the League of Nations**

My references to the other directions in which the League of Nations has occupied itself with public health work must be brief ; many of them are better known than the essentially medical activities I have just been speaking of. There is a most important service of the League for *industrial medicine*. My reference to it must be brief, since the Conventions and Agreements relating to industrial hygiene, as well as its journal "Occupational Hygiene," are not dealt with by the Health Organisation, with which I personally am familiar, but by a separate medical section of the staff of the International Labour Office, deriving authority from the general duties placed upon that Office in the Covenant.

#### SERVICE OF INDUSTRIAL MEDICINE OF THE INTERNATIONAL LABOUR OFFICE

This service has an expert staff, budget, and procedure, all under the direction of the International Labour Office, which, though an organ of the League of Nations, has its own constitution and independent international obligations. On the health side, in the United Kingdom, this work naturally comes to the medical branch of the Factory Department of the Home Office. The service was created within the International Labour Office on the recommendation of the Hygiene Commission appointed by the



Washington Conference in 1919, and it is charged with the study of health conditions amongst all classes of workers, and with the maintenance of close and constant contact with the government medical departments concerned with the administration of labour legislation. Its principal duties fall into two categories :—

1. The preparation of subjects for consideration by the International Labour Conference, with a view to the adoption of *Draft Conventions and Recommendations* which are eventually submitted to the competent national authority in each country for ratification or other action.

2. The collection and dissemination of information on all matters relating to industrial health, which are likely to be of international interest.

Some 32 international conventions have been concluded to date through the International Labour Office, and have been ratified to a larger or smaller extent by States non-members as well as by States members of the League. Of these, those which have resulted specially from the work of the service of industrial medicine relate to White Lead (1921) and Compensation for Occupational Diseases (1925); while the Governing Body of the I.L.O. is also responsible for other conventions specially concerned with occupational hygiene, such as those on Childbirth (1919), and on the Medical Examination of Young Persons at Sea (1921). Besides effecting these international agreements the Governing Body has in many cases submitted detailed recommendations to Governments on action to be taken in health questions affecting the worker; for example, Anthrax, White Phosphorus (1919), Lead poisoning, Maternity in Agriculture (1921), and general principles of sickness insurance (1927).

The service, under its Director, Dr. L. Carozzi, has organised technical studies on the above and other subjects by means of special expert committees—e.g., for anthrax, lead poisoning, and silicosis—or by means of its Correspondence Committee; the results coming for action to the Governing Body of the I.L.O.

The service has also collaborated with various national bodies in the study of industrial fatigue, the occurrence of tar and pitch cancer and cancer due to mineral oils, and of colour vision tests for railwaymen and seamen. It maintains a continuous review of industrial medical questions which is published by I.L.O. under the name of "Occupation and Health," with a corresponding issue in French. The service at present is giving special attention to the protection of married women in industry, to the pathology and hygiene of workers handling solvents of acetyl and nitro-cellulose, as well as silicosis, on which a special study, greatly aided by Dr. Irvine of Johannesburg, has been made since 1925, with notable practical results.

## INTERNATIONAL REGULATION OF OPIUM AND DRUGS OF ADDICTION

I should mention also, but again without attempting to develop the subject, that the Health Organisation of the League, in conjunction with the Paris Office, fulfils certain technical duties in connexion with the organisation at Geneva for the control of opium and other drugs of addiction. The health organisations here have no concern with administrative policy, but they advise when cases are put before them in regard to particular drugs to which the provisions of the Opium Convention, 1925, should apply as being drugs of addiction, or for which exemptions should be allowed. This work, as may be supposed, is confided by both Offices to an expert Commission.

### THE HEALTH MISSIONS OF THE LEAGUE

Public health questions have proved a very useful means by which the League of Nations has been able to make its influence felt in different parts of the world, particularly in extra-European countries which have no very strong urge to participate in many of the political branches of the League's work. Looking down the list of missions, collective or individual, which have been arranged from Geneva, one notes visits for one or other public health purpose to Persia, to the Islands of the Pacific, to Bolivia and Liberia, and to a considerable group of Latin-American countries, in addition to the special attention which has been given to Eastern Europe—e.g., Czechoslovakia, Yugoslavia, and Greece. To this must be added a quite special attention to health conditions in the Far East, which began with Dr. Norman White's mission to Far Eastern countries, particularly on quarantine questions, in February, 1924, and which in recent years have been conducted on a very considerable scale, mainly under Dr. Rajchman's own direction, in China. It is difficult to generalise about these missions. Their objects have been very different, and the choice of personnel, collective or individual, has, of course, depended on the purpose in view. In all cases, however, they have constituted a response from the League to a request from the country or countries concerned for consultation or advice on some administrative question or on some particular matter of disease prevalence. They have resulted at the time in instructive reports,

and not seldom the recommendations made in these reports have been the starting point of definite administrative changes, or the foundation of a new school of hygiene, the reorganisation of hospital services, and like matters. The mission has served the purpose of an activator.

These missions have sometimes been conducted by medical officers of suitable nationalities whom the League has borrowed, sometimes by members of the salaried staff of the Health Section at Geneva, and sometimes by a combination of both. They form an excellent example of the principle that countries' members of the League should help each other as far as possible. If rightly carried out, these missions can be so arranged and conducted as to avoid any impression or intention that it is the business of the League's Health Organisation to be in any way executive, or to constitute itself a super-health authority which supervises or criticises the public health administrations of the world. It is particularly important, in my view, that no such impression should be created. Countries have a complete right, subject to the observation of any international agreements to which they are parties, to care for the health of their people in their own way, as their traditions or their policies lead them. I doubt if the world would gain by having stock patterns of administration pressed upon nations by any central authority; I feel sure it would not benefit by stock patterns of national administration in medicine or hygiene. Any recommendations on administrative matters which come from the League must always be considered from this point of view. If, for example, advice were given to all countries in the world which assumed that medicine and public health ought, for choice, to be conducted through an all-embracing State insurance system, or ought all to be directed by central authority, it would not help us in the United Kingdom to have such advice thrust on us exotically, even if we favoured the principles. And as we could not favour the principles, we should only weaken the League and waste valuable time, by having to be continually on our defence against them.

Reverting to League missions it is worth noting, in passing, that where the medical side has been only one of the aspects of the mission, the medical representative has sometimes proved so valuable that the



League has afterwards used his services for wider purposes. Dr. M. D. Mackenzie's visit to Liberia—e.g., in October, 1931—was followed by his being designated by the League in the following year to be one of the Commissioners appointed to delimit frontiers and settle intertribal disputes in that country. Similarly, on a larger scale, the energy with which Dr. Rajchman threw himself into the creation and organisation of health services in China under the Nationalist Government has led to his now being seconded from the post of Medical Director to that of the chief representative of the League in China in respect of all technical questions—economics, communications, opium control, &c., as well as health—on which it has been decided to maintain a special liaison between the Chinese National Government and the League. As the expenses of these missions may be considerable, it should be noted that they do not necessarily fall on our health budget; in the case of Latin-America and China they fall on special funds voted by the Assembly.

In connexion with the funds of the Health Organisation, it is well also to note that the normal budget does not allow us at Geneva to undertake work for the suppression of epidemics or give medical services in the case of catastrophes such as floods and earthquakes out of our own funds. Something has from time to time been done in these directions under special funds, notably in the early days of the League. In general, however, any assistance which has been possible to particular nations in times of epidemics has been limited to local visits and advice and not extended to the employment of staffs or the provision of hospital or other material.

#### INTERCHANGES AND INTELLIGENCE WORK

At an early stage donations from the Rockefeller Foundation enabled the Medical Director to inaugurate a method of mutual instruction in public health administration by setting up what is known as the "interchange" system. Two methods are followed under this system. In the first a public health officer, or in some cases a man appointed to a public health post which he has not yet taken up, is given special facilities for visiting selected countries for the purpose of study. This is little more than an extension of what is done, on a larger

scale, by the Rockefeller Foundation itself. In the second, "collective" interchanges are arranged—that is to say, a group of medical officers of different countries is brought together for a number of weeks during which it visits a selected country for study of its principal health problems and public health methods. In a few cases also these "collective" interchanges have been specialised to particular subjects—for example, milk control or rural hygiene. The "interchange" system is a distinctive feature in the Geneva work. Not the least advantage of the "collective" interchanges has been that the health authorities of the country visited take pains in advance to consider the questions which their foreign visitors are most likely to ask, and the information which should be prepared for them, so that the visit has produced a number of valuable monographs describing the main lines of medical and public health activities. This has been done, for example, for France, Germany, Switzerland, and Denmark, and, last year, excellently for Poland. Naturally the number of participants from any given country is small but we have secured the benefit for several central or local health officers in the United Kingdom. In the case of visitors to this country, either collectively or individually, we were fortunate at the beginning to secure the assistance of the Society of Medical Officers of Health, while later, the London School of Hygiene and Tropical Medicine undertook to provide an organised centre from which the tours and interviews of foreign visitors are arranged. I may venture here to testify to the smoothness and efficiency with which this work is undertaken at the School and the obligation which the organisers of these interchanges are under to Medical Officers of Health, Directors of Institutes and other bodies for the time and labour which they are frequently asked to sacrifice in giving necessary explanations and demonstrations to our foreign visitors.

Besides using this interchange system to collect and publish information regarding the practice of public health administration in different countries, the medical staff at Geneva sometimes achieves the same object by making visits themselves or arranging for them to be made by others. Some of these inquiries have been concerned with particular aspects

of public health work—e.g., rural hygiene or the control over tuberculosis and leprosy; an inquiry into certain aspects of public hospital provision in the United Kingdom is now in progress. Mention should be made here of the series of Statistical Handbooks (for 14 countries, done under the advice of Prof. Major Greenwood) issued as League publications between 1924 and 1928. Their object was to supply for each country an account of the way in which its system of obtaining and classifying mortality statistics has been evolved, and what particular considerations relating to that country must be kept in mind by the student who is using its national death-rates.

Of course, when it comes to obtaining information about the main lines and policy of public health work and medical practice in another country, much care has to be taken by the foreign observer to get the essential points of the picture and set the national practices in their proper relation to the method of government and characteristics of the country concerned. It is by no means easy for the stranger to avoid giving disproportionate emphasis to particular matters which have struck him as novel or unusual. He may create unexpected difficulties by his criticisms, or at the other extreme his reports or observations may be embarrassing to the national administration by the praise which he has given to what those who know consider unsatisfactory. That these difficulties are not insurmountable, especially when the observer is in a position of complete freedom in his reports, has lately been shown by the series of international studies conducted for the Milbank Memorial Fund by Sir Arthur Newsholme and his collaborators, and has been shown also in the reports of experts who have reported for the Health Section of the League. At the present time there is particular value in some of these reports on medical developments abroad. Under the new dictatorships and oligarchies of European countries, entirely new methods of health administration and arrangements for the care of the sick are being introduced and imposed from above, sometimes with all the impulse of a freeing of national spirit and with all the force of modern propaganda. If in the United Kingdom we do things differently for the reason that medical and public health progress is not with us a new thing,



but has gone on through generations as part of the normal requirements of our central and local government, it does not follow that our slower evolution has always led us to the points which the countries now starting from scratch are endeavouring to attain by a single jump. Our own progress may not be leading us in the directions being aimed at—for example, in Poland or in the U.S.S.R.—but it is certainly advisable to realise what the aims and objects of such countries are. In Poland, for instance, during the last few years they have created a huge new system of preventive medicine by means of local health centres under State direction throughout the country, and at the same time have developed their system of health insurance to the extent that 80 per cent. of the population receives treatment under the insurance agencies which is not merely domiciliary, as with us, but includes hospital beds and all kinds of specialist services. In the U.S.S.R. all treatment and prevention of disease are recognised as being from first to last an affair for the State to provide, while it is regarded as legitimate to use the medical services and the results achieved by them as a political weapon in the hands of the Government—for example, as a weapon in the official war against religion. We can, and should, keep our own national lines, but we cannot afford to ignore the results which are being rapidly obtained under these new systems ; we should know the facts and learn the lessons they can teach us.

#### FAR EASTERN HEALTH BUREAU AT SINGAPORE

Sketchy as it necessarily is, my reference to the work of the Health Organisation of the League would be too incomplete without some words about its Far Eastern Bureau at Singapore. The medical secretariat at Geneva has at Singapore a kind of branch office. Its first Director was Dr. Gilbert Brooke, and after him for some years Dr. Gautier, who now directs the publications at the Geneva Office. The office is now filled by Dr. C. L. Park, a senior officer in the Australian Commonwealth Public Health Service, who also brought to it a large experience of the League of Nations' work. The idea that the League would do some special work in health for the Far East presented itself to us quite early ; we owe it, in fact, largely to the Japanese delegate, Dr. Miyajima, and to the example set by Japan,

which gave special subsidies and facilities for the purpose. Its actual establishment followed a notable tour by Dr. Norman White to the Far East in 1922-23. At that time, so far as international official agreements about infectious disease were concerned, we were still under the system of intercommunication through diplomatic channels, and Dr. White showed that in this part of the world these agreements for the mutual communication of information meant little in practice. He also showed us that the measures taken in regard to the formidable infectious diseases, notably cholera and plague, were being conducted by the countries and colonies on individualistic and arbitrary lines which were difficult to defend. Whatever might ultimately be done in the way of reforming quarantine procedure in the Far East, one thing seemed immediately practicable and desirable—namely, to arrange that the public health authorities of different countries in that region had a good system of exchanging information about the existence of infection in their ports. The first object of the Far Eastern Bureau therefore was to be the centre through which, with the minimum of formalities, the different countries could pool their information about epidemics. Evidently a great deal of use could be made of wireless messages, and we were satisfied that, whether for wireless or for cables, a code should be feasible which would enable essential facts to be sent through quickly and economically. The Bureau at Singapore was set up with the financial assistance not only of some of the Far Eastern Governments but also, and very substantially, with the aid of the Rockefeller Foundation. It was organised on the advice of and after several conferences with representatives of various Far Eastern medical services, notably those of India, the Dutch East Indies, Japan, and the United States for the Philippines, and it was provided with an Advisory Committee on which the services of Major-General Sir J. Graham, late Public Health Commissioner with the Government of India, were invaluable, and over which he presided for several years. On the advice of this Committee also the Bureau has occupied itself with other matters of interest in disease prevention in these regions, notably with coördination of researches into epidemic diseases.

The Bureau was a going concern and had fully justified the intentions of its founders by 1926, when

the International Sanitary Conference of Paris, to which I will presently refer, was held, and the whole question of organising the transmission of news regarding infectious diseases at ports was placed on a new basis. The basis then adopted, in fact, was one which the Singapore Bureau had already shown to be practicable. One of the clauses in the 1926 Convention enabled the work of the Bureau to be utilised in the world scheme which has since been put into operation. It has continued and extended the work for which it was founded, and has been of substantial value by providing an outpost from the Geneva office working for a large section of the world which can only have a limited contact with Europe.

I may add here, though it has no connexion with the League of Nations, that there is another international bureau which obtains information about infectious diseases over as wide a region. This is the Pan-American Sanitary Bureau at Washington, whose intelligence system, greatly aided by the United States public health service, covers the two Americas. Like the Singapore Bureau for the Far East, it is now linked up in the common world system of information about epidemics established internationally in 1926.

#### THE PAN-AMERICAN SANITARY CONFERENCES, BUREAU, AND SANITARY CODE

The creation of the Pan-American Sanitary Conferences and of the Pan-American Sanitary Bureau was authorised by resolutions adopted by the Second International Conference of the American States, which met in Mexico City, Oct. 22nd, 1901–Jan. 22nd, 1902. These Conferences and the Bureau were originally known as “International” instead of “Pan-American,” the names having been changed because of the creation of the Office International d’Hygiène publique of Paris.

The Pan-American Sanitary Bureau, which is the executive organ of the Pan-American Sanitary Conferences, was actually formed or organised by the First International Sanitary Conference of American Republics, which met in Washington, Dec. 2nd, 3rd, and 4th, 1902. Each succeeding Sanitary Conference, of which there have been seven, has elected (or re-elected) the officers of the Bureau, consisting of an Honorary Director, the Director, the Vice-Director, a Secretary, and four members. Employees are appointed by the Director.



The status of the Pan-American Sanitary Bureau is definitely fixed by the Pan-American Sanitary Code (Chapter IX., page 13), an international sanitary treaty which revised (and in part reiterated) the Washington Convention of 1905. This code or treaty was signed by the Seventh Pan-American Sanitary Conference at Havana, Cuba, on Nov. 14th, 1924. It has been ratified by 19 American Republics to date, and its provisions are adhered to by the Health Authorities of the other two.

This code was prepared for inter-American practice, and was based in large measure on the International Sanitary Conventions. It has not been superseded by the International Sanitary Convention of 1926, to which it is regarded as forming a complementary though independent document.

The Bureau, since the Directorship of Surgeon-General Cumming in 1920, has sent technical officers to different American States for special services; it publishes an official bulletin besides providing the intelligence system above referred to.

To avoid a confusion which sometimes arises, it should be added that the Fifth International Conference of American Republics (not a Sanitary Conference) authorised the Director of the Pan-American Sanitary Bureau to call together in Washington, once in five years, the Directing Heads of the Departments of Health of the 21 American Republics. This body is separate and distinct from the Pan-American Sanitary Conferences and on a different basis. Whereas delegates to the Pan-American Sanitary Conferences have plenary powers within certain limitations and can actually make *ad referendum* treaties, the meetings of the Directors of Health have no such powers.

### Office International d'Hygiène Publique

It will have been realised that when dealing with the League of Nations health work one has been concerned with expert consultations, missions, intelligence work and the like which essentially are dependent on and arranged by the Medical or Health Section of the League Secretariat, and to a considerable extent carried out by its own medical staff. This Health Section has the aid of a Health Committee of the League, appointed by the Council triennially, which advises on principles, receives reports (often after their publication), and forwards them to the Council. Meetings of this Committee are regulated accordingly and are not now held very frequently. At the Office International d'Hygiène publique in Paris the position of its Permanent Committee is

quite a different one. The greater part of the work of that Office is based on regular half-yearly sessions of the Committee itself and on the communications which the Government delegates who form the Committee make themselves, or bring from the experts they have consulted in their own countries. The half-yearly sessions of the Paris Committee are busy ones, extending over ten days. The Governments now represented by delegates are as many as 51—in the case of the British Empire including separate delegates for the several Dominions and India and for the British Colonies. The United States and Russia—now the U.S.S.R.—have been represented from the beginning, while such important countries as Japan and Germany, Rumania and Czechoslovakia have become members of the Office within the last ten years, and have strengthened it greatly by bringing in the work of their public health services. The funds of the Paris Office are derived exclusively from the participating Governments, on a system fixed in 1907. The annual total is materially less than that of the annual health budget of the League.

To appreciate what it is that keeps the Paris Committee busy and justifies the attendance of representatives of Government health services from all parts of the world, it is useful to glance back at the circumstances which led to the establishment of the Office International and its Permanent Committee by the International Agreement of Rome, 1907, under which it works. The roots will be found in the great epidemic visitations of plague and cholera in the earlier part of the last century. It is enough to turn to any contemporary accounts of these epidemics in the Levant—read for example the description of plague in Cairo in “*Eothen*”—and consider how these periodical scourges used to be feared by Mediterranean countries and in Europe generally, to appreciate the way in which every country had come independently to protect itself and its frontiers by the methods then thought to be possible and effective. It was the period of the erection of large lazarets for the detention of persons arriving from suspected places, if indeed they were not arbitrarily detained for days or weeks in harbour on the ships which brought them or were, quite inhumanly, refused admission and sent away to any other country. It was a time also

when merchandise was rejected wholesale or destroyed on suspicion of infection, each country acting in these respects on its own lines and in its own lights. The situation in regard to plague and yellow fever had by 1851 become so troublesome and the inconveniences to commerce so great, particularly in the Levant and the Mediterranean basin, that an effort was made by a few countries by means of a conference in Paris in that year to obtain some mutual understandings about the requirements which they would make in the case of shipping in the Mediterranean basin. The countries sending delegates were Austria, Spain, France, Great Britain, Greece, and Sardinia, the British representative being Dr. Sutherland, at that time in the service of the Privy Council. There followed the war years of the Crimea as well as the cholera visitations of 1853 and 1854, increasing the confusion and leading to other conferences—at Paris in 1859, at Constantinople in 1866, and at Vienna in 1874. At these conferences the necessity of a common understanding made some progress, evident again at later conferences in Washington in 1881 and at Rome in 1885. But it was not until 1892 at Venice that a formal “sanitary convention”<sup>1</sup> between countries made its appearance. This was the result of a general desire to control the introduction of *cholera* into the Mediterranean basin from the East by the Suez Canal route. A conference in the following year at Dresden extended the mutual agreements on this subject, while in 1894 another international conference at Paris settled mutual arrangements for the sanitary regulation of the Pilgrimage to Mecca and questions of quarantine in the Persian Gulf. Then in 1896 came the revival of *plague* in Bombay and its rapid extension to various parts of the world. The plague position was taken up by an international conference in Venice in 1897, and following the appearance of plague in Egypt in 1899, the various conventions by this time established were again considered at the sanitary conference at Paris in 1903, which for the first time prepared an international convention which dealt both with cholera and with plague.

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<sup>1</sup> In series, the general “International Sanitary Conventions” have been those of Venice, 1892; Paris, 1903; Paris, 1912; and Paris, 1926. The term “sanitary” dates back to the wider use of the word, as used for example by Simon in “English Sanitary Institutions.”



An important factor of these conferences and conventions, which essentially were concerned with the protection of Europe from eastern infection, was the fact that a large section of the Levantine ports was controlled by a quasi-international body at Constantinople—namely, the Constantinople Superior Board of Health. The history of this body, which dated from 1838, has been admirably recorded by Dr. Clemow.<sup>2</sup>

#### CONSTANTINOPLE SUPERIOR BOARD OF HEALTH, 1838–1914

As an administrative body in the old Turkish Empire, dependent in large measure on the foreign consulates at Constantinople, the Superior Board of Health passed through several changes and stormy periods during the 75 years of its existence. It became, however, an important organisation, which maintained a sanitary service (1) at all the chief ports of the Black Sea, in the Straits, and on the coast of Asia Minor; (2) in the Red Sea and for the Mecca Pilgrimage; and (3) on the Turko-Persian frontier and for the Shiah pilgrimage. It had a very large staff, chiefly of Levantine medical officers, and quite large funds; quarantine dues were high in the Near East during last century, and still remain so. Its functions came to an end at the outbreak of the war in 1914, and its formal winding up, the distribution of its property, and the compensation to its personnel were provided for by the Treaty of Lausanne, 1923, and completed in 1927.

The action taken by the Constantinople Board was in large measure determined and regulated by the successive International Sanitary Conventions, and the same was the case with another quasi-international body, the Quarantine Board of Egypt, established about the same period. The latter has continued its existence and since the war has increased its importance in the scheme of protection against the transmission of epidemic diseases from the East.

#### LE CONSEIL SANITAIRE MARITIME ET QUARANTENAIRE D'EGYPTE

This body, usually known as the Egyptian Quarantine Board, has its headquarters in Alexandria. Financially, it depends, in major part, on the quarantine dues obtained for its services and in part also on the Government of Egypt. Its main functions are the protection of Egypt from invasion by infectious diseases on its frontiers,

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<sup>2</sup> See THE LANCET, 1923, i., 1074, 1120, and 1180, and 1929, i., 93.

particularly its seaports, and the protection of the countries in the Mediterranean and beyond by means of the control which it exercises over the transit of vessels arriving from the south and passing through the Suez Canal. In addition, the Quarantine Board has various special health responsibilities in regard to the Mecca pilgrimage and pilgrim ships. The executive work is directed by the President of the Board, an appointment which now for a long period has been held by distinguished and capable administrators: the late Sir M. Armand Ruffer (1897-1917), Dr. Alexander Granville (1917-1923), Major C. F. Thomson (1925-1928), and its present occupant, Major J. Gilmour. The Board itself, on which for many years the British representative was Dr. A. Morrison, consists of representatives of the consular services of certain powers, whose position in the organisation has been determined by events in the history of Egypt which are political rather than medical. Authority formerly given to it by Khedivial decrees has been recognised internationally in successive International Sanitary Conventions, to which the quarantine regulations which it applies are expected to conform. The Convention of 1926 added some new duties to the Board, notably that of making an annual report on the general sanitary control of the Mecca pilgrimage and of forming a "regional bureau" of the Office International d'Hygiène publique in respect of intelligence about epidemics in countries in the Near East.

It is interesting to note, from evidence kindly given to me by Dr. Shahin Pacha, the present Minister of Health in Egypt, how far back this Board can trace its origins. It is a common assumption that the Board is a body originally imposed on the Government of Egypt by the European powers. In fact, however, it was a reverse process, as its beginnings are found as long ago as 1831, when Mahommed Ali called on the European Consular body in Alexandria to organise and apply measures against plague and other infectious diseases comparable to those then in vogue (and of appalling severity) in other ports of the Mediterranean; a request repeated and fortified in 1835, when the whole of the foreign consular body in that city were asked to undertake the direction of the service. As in those days, and long after until the opening of the Suez Canal in 1869, the ships to be quarantined were those arriving on the north from Mediterranean and Levantine ports, it is easy to understand how Alexandria was then, and has remained, the centre of all the Board's activities.

It is interesting to note the importance which in the middle of last century must have been attached in this country to the various conferences and conventions above mentioned, perhaps more from the commercial than from the public health point of

view. It is true that we had had formidable invasions of Asiatic cholera in England, as no one is likely to forget in reading the English history of the century down to 1865. It was cholera almost as much as any other factor which determined the first establishment of a Government health service in the form of the Medical Department of the Privy Council. But that department, during the time of Simon's dogmatism and long afterwards, refused to place any serious reliance on attempts to prevent the importation of cholera. They considered periodical invasions of Europe (including England) by pandemic cholera to be inevitable. They desired, indeed, nothing to be done to diminish the lively apprehensions of cholera which were then doing so much good by bringing about the purification of our public water-supplies and by improving our internal measures of sanitation. The local sanitary authorities of our port towns were, of course, expected to protect themselves against the spread of cholera if it arrived, and had powers and duties to undertake inspection of ships within reasonable limits. But the work was essentially local. There was never at that time any question of Government subsidy or anything beyond the minimum of Government action at our ports. It was the time of great development of commerce on free trade principles, and the spirit of that time was all in favour of a British policy of freedom, which in many ways rightly prevailed, but sometimes went much further than other countries were disposed to accept, or even than we should be justified in maintaining now. This earlier policy was, of course, favoured by the limitations of epidemiological knowledge—the part played in infection by human, animal, or insect carriers was not realised, and there was little help from the laboratory.

New knowledge began to tell however, and in fact it was the repeated demonstration of the need for continued studies of the transmission of these pestilential diseases which led to the formation of the Office International d'Hygiène publique in Paris. Only by continuous expert study, and by recommendations agreed between the technical representatives of all the countries concerned, could the principles of the measures which should be taken and the obligations which Governments should jointly assume be fixed with any prospect of practical success. The pro-



posals to establish an International Office for the purpose was made by that distinguished French diplomatist, happily still with us, M. Camille Barrère, as president of the Paris Conference of 1903. It took shape in 1907 in the agreement then made in Rome between 13 countries. The Bureau of the Office was established in Paris at 195, Boulevard St. Germain, and began its work in 1909, when the system of half-yearly meetings of the delegates was begun and has been followed from that beginning.

I will refer a little later to other work done by the Office, but to continue with the so-called pestilential diseases and quarantine questions, one may say here that the establishment of the Office at once justified itself when it became necessary again to revise the International Sanitary Convention in 1912, principally on account of the new situation created by the pushing forward of the Hedjaz railway, and the prospect at that time that the elaborate international system for preventing the recurrence of the spread of cholera by pilgrims returning from Mecca would have to be radically changed in consequence of this much-favoured Turkish project coming into operation. I note here in parentheses that this line has never been completed in Arabia, and it does not at present constitute a practical factor in the sanitary control of the Pilgrimage.

#### INTERNATIONAL CONTROL OVER THE ANNUAL PILGRIMAGE TO MECCA

Most of the conferences and conventions and a number of regional agreements have been concerned with the potential centre of distribution of cholera which is created when pilgrims from all parts of the Mohammedan world congregate during the days of the Haj at the several holy places of Arabia, and infection can readily be spread through their fouled and scanty water-supplies and otherwise. The range of the pilgrimage is surprising; it is made from Turkestan and the Caspian, from Northern and Western Africa, as well as from the nearby countries of the Levant. They meet there pilgrims from areas which are or have been endemic centres of cholera; many thousands from India, from Malaya, the Dutch East Indies, and even further afield. Some though not all of the classic cholera pandemics have thus had their origin. Between 1831 and 1912, as many as 27 years have been recorded in which epidemic cholera in connexion with the pilgrimage occurred on a larger or smaller scale. The notable English cholera epidemics of 1865-66 repre-

sented an extension from infection at Mecca in the first of these years <sup>3</sup>; the most formidable extension of cholera by the pilgrimage occurred in 1893.

After the interruption of the war years the pilgrimage reverted to its former size, and exceeded 100,000 in 1927. Since then, however, various causes, chiefly economic, have greatly reduced the annual figures, but the reduction may well be temporary. In any event the international arrangements to check the spread of infection must be maintained and made to respond to modern possibilities. The different phases of the elaborate international coöperation for this purpose are excellently set out by Dr. Duguët, Inspector-General of the Quarantine Board of Egypt, in his recent volume, "*La Pélerinage de la Mecque*" (Riever, Paris, 1932). Here it will suffice to note that the present system comprises: (*a*) provision for inspection of pilgrims before departure, and their vaccination against cholera; (*b*) detailed sanitary regulations applying to all pilgrim ships; (*c*) for ships coming to the Red Sea from the south, inspection at Kamaran, an island with a well-equipped sanitary station, now maintained by agreement (1926) between the Governments of British India and the Dutch East Indies; (*d*) for pilgrims coming by land routes sanitary passports and intercommunication between the authorities concerned, so as to regulate and minimise the repetition of medical measures taken at successive frontiers; (*e*) for pilgrims returning northward, examination at the quarantine station at El Tor, on the Sinai peninsula.

Considering the number of different nations and authorities which are concerned, the present system works surprisingly well and is achieving its main purpose. Since the International Sanitary Convention of 1926 it has come under annual survey by the Paris Office and its standing Pilgrimage Commission.

### **The International Sanitary Convention, 1926**

After the war, as I have already shown, the impulse to establishment of greater confidence between countries was growing, while it had to be realised that the latest convention, though as recent as 1912, now related to a pre-war political geography that was extinct, and to States whose governments as well as whose frontiers had been radically changed. Meanwhile, also, a good deal more had been learned

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<sup>3</sup> See also "Papers concerning the European Relations of Asiatic Cholera," by Dr. Netten Radcliffe and others; Report to the Medical Officer of the Privy Council and Local Government Board. New Series. No. V., 1875."

from the war years about international coöperation over infectious diseases, and it was clear that if any general new convention was made it could no longer be limited to cholera, plague, and yellow fever. Several countries had, for example, adopted a policy of their own to control the entry of typhus and small-pox infection at their sea or land frontiers, and action in regard to these two diseases at least required some mutual understanding in the interests of traffic and of rational hygiene. We were in great difficulties also in consequence of the way in which rat plague had spread from port to port by means of shipping, often causing human plague and, in any case, great expense in its eradication. The danger was being met by efficient methods of effectively destroying rats, particularly by cyanide fumigation, but shipping was finding itself in the impossible position of having to submit to deratisation and all the delay and cost that it involved, at one port after another, undertaken merely because the vessel had originally come from an infected country, and without regard to the previous deratisations or fumigations to which she might have been subjected in course of the same voyage. It may well be supposed that when the fumigation of a ship on which there was no evidence of any plague infection was found to cost several hundreds of pounds without producing a single dead rat, the owners became eloquent.

The difficulties of amending the 1912 Convention and adjusting it to new conditions, political and medical, were very great. Nothing could have seemed more contradictory, for example, than the post-war policies of the health services of the United States, Japan, and Great Britain on many of the questions at issue. Indeed, at one time it seemed likely that no new world-wide agreement would be possible, and that the whole matter would have to be left to particular agreements negotiated between countries or to regional agreements. This view was strongly contested by countries like our own with a large world trade, and fortunately with good effect. The convention which at present regulates all these matters—the International Sanitary Convention of Paris, 1926—drawn up by a plenipotentiary conference working on the drafts prepared by the Office International d'Hygiène publique—is world-wide in its application, and was able to be so by its being



based on the adoption of new principles of international coöperation. The rat difficulty, for example, was met with by establishing the now well-known international system under which all ships are liable to examination every six months at designated ports, in order to ascertain whether they are rat-infested and should or should not be deratised. Then, again, the several infections were no longer dealt with collectively but each according to the natural history of the disease. For "infected ship" we substituted "plague-infected ship," cholera-infected ship, and so on. Next, the whole system of intercommunication between countries in regard to the prevalence of infectious diseases was altered. While diplomatic communications were preserved for certain purposes, it was the technical office in Paris which was then made directly responsible for the receipt and dissemination of the necessary information to the health departments of the signatory countries. It was here that the links with the Singapore Bureau and the Pan-American Sanitary Bureau, already described, became important.

The Office International was made responsible also for many other duties, such as the coördination of the sanitary control of the Mecca Pilgrimage, the promotion of subsidiary local agreements, and generally for a continued supervision over the way in which the Convention worked in practice. This function it has fulfilled conscientiously and thoroughly by means of a standing Quarantine Commission which meets during its half-yearly sessions, and gives its opinion for transmission to governments on any anomalies which are brought to its notice and on any matters of practice which are not defined in the Convention but require a common understanding. At recent sessions, for example, the Quarantine Commission has dealt with the standards which should be adopted for the fumigation of ships by cyanide, or sulphur, with the abolition of the aged but unvenerated requirement that ships should carry and produce bills of health in relation to the ports from which they have come, with measures for facilitating direct communication between port medical officers of adjoining countries, with the international codes of flags, signals, and wireless which are required for public health purposes, and many other relative questions. Their findings on these matters are often

only arrived at after discussion at two or three sessions, during which the delegates have been in position to ascertain the views of their own governments and consult their experts ; but when arrived at they have never to my knowledge been seriously questioned, and are now very widely adopted and govern the ordinary practice of port sanitary authorities.

We are, of course, far from having achieved finality by the International Sanitary Convention, 1926, but it may safely be asserted that its prescriptions, when subject to constant practical consideration and revision in the way which is effected in Paris, have within the last few years almost metamorphosed the practice of port sanitary administration for the better. One anomaly after another has been removed, in each case with the object on the one hand of strengthening the national sanitary authorities in their real task of disease prevention, and on the other of saving transport and shipping from useless and unnecessary interference. The Paris Office in this matter has, I believe, come to possess the confidence both of the public health departments and the shipping interests of the maritime countries. All this, I may add, is exemplified in the changes which have been made in our own system of port sanitary administration in the United Kingdom since 1926, during which time we have given close attention at the Ministry of Health and in the Departments of Health for Scotland and Northern Ireland to the equipment and working of our port administration on the lines internationally agreed to. In recently amending and consolidating the port sanitary regulations made under national legislation in the United Kingdom, the various requirements of the Convention have received due recognition. Their working, as I have indicated, is dependent on the system by which the intelligence we obtain about infectious diseases abroad under the terms of the Convention, and also through the activities of the British Consular Service, is classified and made readily and rapidly available to port medical officers of health. This is done in the Medical Intelligence section of the Ministry of Health, chiefly by means of a confidential "Weekly Record," designed by my colleague Colonel S. P. James, which I venture to claim as a model of its kind.

### **The International Sanitary Convention for Aerial Navigation, 1933**

The experience gained in preparing the International Sanitary Convention, 1926, encouraged the Paris Office a little later to take up a proposition originally made by the Italian representative at the time of the Peace Conference—namely, that international rules should be established in respect of the precautions to be taken to prevent the transmission of infectious disease by aircraft. At first sight this object seemed one which could be attained by enunciating a few simple and general principles. While international air traffic did undoubtedly add a new route by which infection could be carried, the number of passengers was infinitesimal in relation to those going by sea, and, relatively speaking, they were well-to-do and responsible people. The parallel case seemed rather to be that of international journeys by train and road, for which a few simple rules, chiefly in the direction of securing the maximum of liberty and non-interference with merchandise, had sufficed. But it soon became evident that something more was wanted. The opening up of long air routes, from the East in particular, was held by certain countries which are always apprehensive of the importation of cholera—e.g., Egypt or Persia—to require the imposition on arrivals by aircraft of the same measures which had been so lately settled in Paris for arrivals by ship. Thus, passengers coming from infected or suspected countries like India were to be made liable to detention at the aerodrome, say, in Persia or in Egypt, pending the results of bacteriological examination of their stools, and special requirements were being prescribed in respect of place of landing of the aircraft itself and the movement of its crew.

Another and troublesome demand arose for evidence of the health of the places from which the aircraft had come, which took the form of expecting air traffic to be complicated with the same system of bills of health which had proved such an irksome and profitless formality in the case of shipping. In fact, we were up against several of the old questions of unnecessary and irritating measures which were not warranted by the actual risks.

There was, however, another side to it. The



introduction of air traffic in certain cases has actually created a new kind of risk of introduction of infection by reason of the rapidity of air flights from distant countries. The public health authorities were within their rights and, indeed, only performing an obvious duty when they were taking measures to protect themselves against these risks. The questions, internationally, were what form the action should take, how to define it in terms of maximum measures, and how to secure a reasonable uniformity which would enable the air lines to know what was expected of them. The case with which we were principally concerned was that of yellow fever, less perhaps in respect of the existing air lines than of those which sooner or later are sure to be established between the yellow fever infected countries in Africa to other parts of that continent. Such lines are already in operation in the New World when the countries of yellow fever prevalence are traversed. The yellow fever danger, in the absence of control, was accordingly represented as being a very formidable one, seeing that all the conditions, including the presence of *stegomyia*, which promote the spread of yellow fever infection were present in the uninfected eastern part of Africa, and that India and other countries farther to the East, where the same position obtained, had the gravest apprehensions about the introduction by air of a disease which, on account of its natural history and methods of spread, was believed hitherto never to have gained access to their populations.

Fortunately, however, the case was one in which the establishment and observance of an agreed code of action should go a long way to the removal of any legitimate apprehensions on this ground. The key of the position was that the number of aerodromes at which countries permit arrivals from other countries is very small, for customs and political reasons. Hence there are few centres to control and at most of them access to medical services is feasible. So that, given an aerodrome used for international flight which is in a region where yellow fever exists, it is usually quite a practicable thing to keep that aerodrome and its personnel free from infection. And as to mosquitoes, it is fortunately not difficult to secure their destruction in passenger aircraft. And finally, in order to obviate the risk of the flight of

passengers who have quite recently been infected and who might be able during the six days thereafter to infect *stegomyia* in a susceptible country, the problem is no greater than those which are constantly dealt with by any medical officer of health for other diseases. It resolves itself into medical examination and inquiry into recent movements of the passenger at those particular aerodromes where the possibility of yellow fever infection has to be considered—i.e., those which, by reason of the greater euphony of the French name, we have termed “Anti-Amaryl Aerodromes.” This can, if need be, be supplemented by observation of the passenger until the end of the six-day period.

By degrees and after several sessions, and always in close consultation with representatives of air navigation, the Committee of the Office found itself therefore in a position to supplement the International Sanitary Convention, 1926, which deals with sea and land transport, by the International Sanitary Convention for Aerial Navigation, which was opened for signature at The Hague in April, 1933, and has already been signed on behalf of many important countries and their possessions. The code is sufficiently comprehensive to be applicable to American air routes, as well as to the Old World; and subject to the completion of a technical reservation, which gives no difficulty, this Convention is to be signed by the United States. It should be added that the Second Pan-American conference of Directors of Health also assisted the Office International by giving consideration and approval to the text.

Looking to the great importance attached to the yellow fever aspect of the question in West Africa and the East, it is satisfactory to note that its universal acceptance by states, dominions, and colonies in the Continent of Africa has already nearly been achieved. For this result, special recognition is due to the initiative of the Government of the Union of South Africa, which secured a conference on this and other subjects at the end of 1932 and went into the question in all its bearings. In this, the coöperation of the Health Organisation of the League of Nations proved most useful, since they not only accepted the request of the Union to convene the conference at Cape Town but also were represented by Dr. Park and myself as Secretary and President respectively.

### **Other International Health Conventions: the Brussels Agreement, 1924**

The international conventions and agreements on health questions which may come before the Paris Office are by no means limited to quarantine. The Royal College of Physicians has a particular interest in one such agreement—that which settles the International List of Causes of Death (which owes much to the help given to the British delegation by our former President, Sir Humphry Rolleston) and has to be related to the Nomenclature of Diseases for which the College is responsible. But as the position of the Paris Office to that agreement is not one of direct responsibility, I will choose another example—namely, the Brussels Agreement of 1924—using a few notes from my colleague, Dr. M. T. Morgan, who in future will represent the United Kingdom on the Permanent Committee of the Paris Office, and has also been included by that committee among its nominees to the Health Committee at Geneva.

Many of us will remember our apprehensions of increase in venereal disease after demobilisation, and especially the fear we had of the introduction of severe types of syphilis from eastern and other foreign countries on the resumption of normal sea traffic. To meet this apprehension special care was taken in the United Kingdom to augment the number and increase the efficiency of our State-subsidised venereal disease clinics, and more than ordinary attention was given to this provision in our seaports. At our venereal disease clinics it has always been the practice to give the same facilities to the foreigner and to the foreign seaman as to our own nationals. But this practice was far from being general or reciprocal in all parts of the world, and we had evidence that in several ports overseas the incidence of venereal disease was very high, and that British seamen were contracting these diseases there without being treated, and were introducing the infection on their return to home ports. In these circumstances I was instructed to raise the question before the Permanent Committee of the Paris Office in the spring of 1920, and the discussions which then began ultimately materialised in an international agreement respecting facilities to be given to merchant seamen



for the treatment of venereal diseases, which was signed at Brussels on Dec. 21st, 1924. This agreement, therefore, has been in operation for over nine years. It has been ratified by 16 countries, including some of the principal maritime nations of the world, and received the adherence of 24 Governments, who apply it although they have not gone through the formality of ratification. To these should be added other countries who, rather inconveniently, are not signatory, but conform fairly closely to the scheme of the Agreement. This document consists of seven articles, by which the signatory countries undertake to establish and maintain in each of their principal sea or river ports services for the treatment of venereal disease open to all merchant seamen or watermen without distinction of nationality, such services comprising modern treatment. The supply of medical necessities, and treatment in hospital should the doctor of the service consider it essential, are to be free of charge, as also are necessary medical supplies to enable treatment to be followed on the voyage to the next port of call.

It is part of the system that each patient receives a card following an official international model which is strictly personal to himself and on which he is designated by a number only. This card records diagnosis, treatment carried out at the various centres, and the results of serological and other special examinations. Masters of ships and shipowners are to make known to the crews the existence of the services, and similar action is to be taken by port sanitary authorities. A list of the ports at which the system is working was lately published by the Paris Office and covers some 750 seaports. At the instance of the Ministry of Health this list of centres at ports at home and abroad has been distributed to our own port clinics for venereal diseases, and, through the instrumentality of the Board of Trade and shipowners, copies are also made available to seamen on British ships.

The whole system has worked well and there can be no doubt that it has not only done a good deal for the merchant seaman himself, but has checked the spread of infection among the population generally. The Paris Office last year made inquiries of all the Governments concerned in regard to the practical working of this agreement and the directions

in which improvements might be desirable. It was clear from the replies that the international system is by now well known to sailors, who frequently ask for information about these centres and expect to obtain treatment there. At certain ports, however, some additional measures are needed to make the facilities better known. At other ports arrangements still have to be made for the relatively rare cases in which it is necessary to detain the seaman in hospital. Experience also suggests that certain alterations in the form of the seaman's personal card would be useful. All these details are now receiving fresh attention ; I draw attention to them as an example of the special advantage of the Paris Office as a means of securing that international agreements and conventions are duly applied in practice, or revised when experience brings out some new factor which had not been taken into account when the agreement was made. There are, I believe, many international agreements on other subjects which would be in a healthier state if this principle was applied to them.

### **General Work of the Office International d'Hygiène Publique**

It can hardly be supposed that the delegates from the health departments of over 50 countries could meet for ten days in the spring and again in the autumn and limit themselves to discussing the terms of diplomatic agreements and supervision of their application, however necessary these things may be. The fascination—I use the word advisedly—of these meetings is the use of them which has grown up, particularly under the guidance of our late President, M. Velghe, to communicate and exchange information about the particular happenings which are troubling a particular country to-day, but may well affect its neighbour to-morrow, or of which another neighbour may have special experience. One introduces, for example, the characteristics of the small-pox we have had epidemic in England during recent years ; with its copious rash and classic beginnings fading off almost without fever, pustulation or pitting, and with a practically negligible mortality even in the unvaccinated. This brings out experience of “alastrim” elsewhere ; it leads after one or two sessions to an

understanding of the nature and geographical extent of what we now agree to call "variola minor," to the understanding that it can coexist with variola major, and presently to the adoption of these two terms in official nomenclature—incidentally to our own great convenience, administratively, in this country. We got these conclusions in this particular case because one member of the Committee, Prof. Ricardo Jorge of Lisbon, was willing to give his time and unrivalled epidemiological acumen to a survey of the world data, and prepare a report for us. Prof. Jorge has rendered us many such services, as have Dr. Jitta, Dr. Lutrario, Dr. Hamel, Dr. Tsurumi, the late Prof. Cantacuzène, and the representatives of the French and Belgian Colonial health services—it is, indeed, invidious to mention names, since one member after another takes up the particular burden for the common good. *Proximus ardet*; when Dr. Madsen tells us of epidemic myalgia, under the name of "Bornholm disease," in Denmark, we start looking for it in other Scandinavian countries, or in Poland, in Germany or England, and bring the results to the next session. The early inquiry into undulant fever in England, made for the Ministry of Health by Sir W. Dalrymple-Champneys in 1929, was the result of communications which I brought home from Paris, which showed how necessary it was to look out for this disease in Northern Europe. There have been many such.

Sometimes common action needs to be concerted between delegates although a formal agreement is recognised to be undesirable—this has been the case with the European prohibition of the importation of parrots since the psittacosis of 1929–30. If we were to stop the movements of parrots from country to country—and it was necessary—we had to act together in Europe. In this country we were at first some weeks behind other countries, and were running a definite risk of being swamped by possibly infected parrots which were denied their usual markets on the Continent. I hope that the European countries will continue to pool all their information on this subject if the Paris Office should recommend—the matter is not yet settled—that universal prohibition is no longer necessary; unfortunately it is not only with parrots that the removal of a restriction is more difficult than its original imposition.

I should end my note about the work of the



International Office of Public Health in Paris by a reference to the review of its 25 years of activity, presented to us by the Director of the Office in October.<sup>4</sup> For all the work I have described and for much more we depend on the Director of the Office, Dr. Abt, and his deputy, M. Marignac, and the small competent personnel through whom all the regular intelligence functions of the Office under the Conventions are carried out. They have also the really considerable credit of that unique monthly publication, the *Bulletin Mensuel de l'Office International d'Hygiène publique*. This bulletin is authoritative as regards public health laws and regulations in different countries; it now reproduces all the chief contributions made or presented by the delegates at the sessions, and adds abstracts and reviews selected for their international value.

A word must also be said here to recognise the accuracy with which this small staff deals with documents in many languages and presents them in the official language of the Office, which is French. This goes far, though obviously not far enough for English-speaking people, to compensate for the absence from our Paris meetings of the bilingual system of the League of Nations, in which there are two official languages—French and English. An English edition of the *Bulletin Mensuel*, if funds allowed, would certainly be of very great advantage.

### **Some Concluding Observations on the International Health Organisations, and British participation**

I feel, in conclusion, that, notwithstanding the description I have given of the working of the organisations at Geneva and at Paris, I may still be asked a familiar question—namely, whether it is necessary that public health and medical work which is so essentially dependent on Governments and their Health Departments, should continue to be conducted in two capitals by two committees and two secretariats.

Another occasion must be taken to discuss the advantages and disadvantages of reviving and revising

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<sup>4</sup> Vingt-cinq ans d'activité de l'office international d'Hygiène publique, 1909-33. Par Dr. Georges Abt. Published at 195, Boulevard St. Germain. 1933.

the Assembly project of Dec., 1920, mentioned at the beginning of these lectures—taking account of the special lines on which each of these international organs has developed, and the strength which each of them has gained, since that date. New international discussions and new conclusions on this subject will be required sooner or later. But meanwhile, from the point of view of those who participate in the work, the duplication, such as it is, gives relatively little trouble. And the advantages of the two organs functioning side by side each in the directions which I have mentioned are so great, that it is hardly desirable to raise constitutional questions about their mutual relationship unless or until some new and strong reason arises to disturb the present order of things. Objections may be made to the scheme of creation which gives us a left hand as well as a right, and there are occasional drawbacks from the right hand not knowing what the left is doing. At the same time it is our general experience that, given a good directing brain, we get on with two hands better than with one.

There are in this connexion some *imperial and domestic considerations* worth a moment's further review. No one could take part, as I have done, in the many official conferences, in the preparation of international conventions, or in the discussions at these international health offices, without realising how naturally they come to assist the mutual understanding and helpfulness of the English-speaking peoples, and here, with experience of the way in which the great public health service of the United States, under the epoch-making direction of Surgeon-General Cumming, has responded to every call for international effort, it is right to add the U.S.A. and the British Commonwealth of Nations together. It is not that the English-speaking peoples combine against those of Latin or other nationalities—in several ways the American and Australian methods are much closer to those of other countries than they are to the United Kingdom—but it comes about from the language, and also the fact of possessing similar basic traditions of health administration, legislation, and medical practice.

Australia, Canada, New Zealand, the Union of South Africa, the Irish Free State, the Sudan, are all countries which adhere to the Rome Convention,

1907, and are represented by their own delegates at the Paris Office. In one or two cases where distance makes it inconvenient for the Dominion to send a representative from its health service, the Ministry of Health has been invited to permit one of its medical officers to act for and report to the Dominion Government. This practice has been found mutually convenient, particularly as it has put at the disposal of the Office International medical officers with such special experience as is possessed by my colleagues, Colonel S. P. James, the representative of New Zealand, on all tropical medicine questions, and by Colonel P. G. Stock (who was formerly Director of Medical Services in South Africa) on matters of quarantine.

Indian participation again has from the first been of great importance, seeing that it is on Indian information that we have so much to rely when we are dealing with major epidemic diseases such as cholera, plague, and severe small-pox. Until 1929 there was no separate representation for the British colonies, but the creation of the office of Medical Adviser at the Colonial Office naturally carried with it direct representation of the colonies by Sir A. T. Stanton, which has since been continued. The results of the international work are now communicated to the public health services of practically all British colonies and dependencies and countries under British mandate, and every endeavour is made to bring British colonial problems which would help or benefit from international discussion before the Paris Committee—an endeavour which corresponds with that of the numerous colonial and overseas possessions of other countries, notably France, Belgium, and Holland. The coördination or mutual understanding of health work between adjoining colonies of different nationalities, which is so often needed, particularly in Africa, can thus be helped centrally as well as locally. On the League of Nations Health Committee also, though British Empire representation is less complete, the Indian Medical Service has been represented almost from the beginning, while most of the Dominions at one time or another have had a member drawn from their health services.

It is thus not difficult to understand how these international meetings bring together the public health services of the English-speaking nations in a



way which would not otherwise be achieved. We come almost of necessity to establish a personal relationship with fellow-workers overseas which is invaluable as a time-saver when dealing with common problems.

One might even go further in enumerating the advantages of international coöperation by referring to our domestic arrangements. British representation at, and the chief work connected with, these offices naturally falls on the Ministry of Health. In this respect that Ministry inherits, through the Local Government Board, the traditions of the medical department of the Privy Council. It is to the Ministry of Health, and its medical service, that the home Government looks in the first instance for advice on questions of health policy affecting its relations with foreign countries, and through the Ministry that necessary liaisons with other departments are maintained.

But representation of His Majesty's Government in administrative matters concerning health naturally entails consultation by the Ministry of Health with many other government offices at all stages, and the making of reports which have to go to many different quarters if the representative is properly to do his business ; in particular, if we are to pull our weight, the association with the Medical Research Council and its many committees and research workers must be specially close. In all these matters, what is done through these official international health offices is only half done if it is just treated as belonging to a remote corner of some one department, labelled "international," and only remembered, if at all, when a difficulty has arisen.

A delegate or member of these international committees develops, of course, a kind of special sense as to the administrative bearings of the questions with which they deal, and he may bring to the international council a special personal competence on some one subject on which he is an authority. But for most things he asks for nothing better than the position of a trusted intermediary. As an agent, he wishes to occupy a normal place in the national public health machinery, he wants others to feed him—even to overfeed him—with material to take to and bring back from the international sessions and discussions. The pleasure of the work—and I have found it a great pleasure—is its measure

of the confidence and willing help of one's colleagues, in one's own department, and in all sections of the public service, given for the common benefit.

I should refer in this connexion to a useful practice by which the programme of work at Geneva and Paris is communicated to and discussed generally at the Ministry of Health with medical officers from the Medical Research Council, the Departments of Health for Scotland and for Northern Ireland, and the British Colonies, by means of a medical committee over which my colleague, Dr. T. Carnwath, now presides. The helpfulness of this arrangement can hardly be exaggerated, particularly since the ultimate output needs to be dealt with also in the same way. I must add also a word about the value of our consultations with the London School of Hygiene and Tropical Medicine, which itself has been placed in direct association with the Medical Director and Health Section at Geneva for a number of purposes, including, as I explained above, the arrangements for the reception and guidance of visitors from overseas who desire to study particular British questions. As the work which I have described goes on from strength to strength, as I think it must do, other means may be devised by which its nature and results become more used and better known than they are at present by public health officers and the medical profession generally, for example, by securing some closer association with our great medical colleges and universities.

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